

REMARKS/ARGUMENTS:

Entry of the above amendments, and reconsideration and further examination of this application as amended is respectfully requested. Claims 1-38 and 45-61 remain in the application.

The amendments submitted above to certain claims have been done so either in response to the Examiner's rejections or objections or to correct claim dependency, to correct antecedent basis, to put the claim in conventional form, to correct punctuation, improper word usage, and the like. Specifically, claims 6, 18, 48, and 60 were amended to correct the antecedent basis due to an amendment to an earlier claim. No new matter has been introduced through any of these amendments.

A. Rejection of Claims Under 35 U.S.C. § 102(b)

1. The Examiner has rejected claims 1-4, 13-16, and 25 under 35 U.S.C. §102(b) as being anticipated by JP-10-165,777.

In response, Applicant has amended independent claims 1 and 14 and dependent claims 2 and 15 to more distinctly distinguish Applicant's invention through the further limitations of:

"said first [or second] annular anchor has an upper surface and a lower surface" and a first potting material . . . encasing "said upper surface and said lower surface" of said first [or second] annular anchor . . .

Support for these amendments may be found in the specification on page 9, lines 6-14, and page 13, lines 13-19, and in reference to FIGS. 3A-3D and FIG. 4. Applicant submits that JP-10-165,777 does not teach nor suggest the additional limitations.

JP-10-165,777 teaches a yarn module (comparable to Applicant's filter device 100) and method of making a yarn module that has an end member (or case edge material) 2 (Applicant's ring 108) with a yarn bundle prescribing part 22 (Applicant's annular anchor 306) that dictates the shape of the hollow yarn bundles 4 (Applicant's microfibers 104) within the case body member 1 (Applicant's housing 102) and within the header 6 (Applicant's cap 112) and septum 5 (Applicant's potting compound 116). The yarn bundle prescribing part 22 has a yarn bundle

guide part 21 (Applicant's annular rounded ridges 318) having an angle θ of inclination for inserting yarn bundles in the end member 2 (see Patent Abstracts Of Japan, page 1).

The problem the JP-10-165,777 reference is trying to solve is two-fold. First, JP-10-165,777 is seeking to reduce the potential for stagnation (blood clotting) by minimizing the formation of a header byway (or blood room 62) (see page 3, paragraph 18 in the computer translation and FIG. 2). Second, JP-10-165,777 is seeking to regulate an appearance configuration of the hollow yarn bundles 4 at the header portion of the hollow yarn bundles 4 (see page 3, paragraph 19 in the computer translation and FIG. 2).

The yarn bundle guide part 21 in the case edge material 2 has tilt angle θ (between 10-45 degrees) for thread (hollow yarn bundles 4) insertion (see pages 4-5, paragraph 35 in the computer translation and FIG. 2). As the hollow yarn bundles 4 are inserted, sliding against yarn bundle guide part 21, they are pinched, or restricted, by the yarn bundle prescribing part 22. The inside diameter D1 of yarn bundle prescribing part 22 is optimally determined by the outer diameter of the hollow filaments, the number of hollow filaments in the hollow yarn bundles 4, and a constant k (the filling factor). A proper constant k has been determined to fall in the range of 0.45-0.55 (see page 5, paragraph 38 in the computer translation and FIG. 2). When the ends of the hollow yarn bundles 4 are secured by the septum 5 after curing, and sliced with a sharp cutter, exposing the openings of the filaments, a uniform appearance at the edge of septum 5 is presented to the blood room 62 (see page 2, paragraph 9 in the computer translation and FIG. 2).

There is no teaching in JP-10-165,777 that case edge material 2, and specifically yarn bundle prescribing part 22, serves an anchoring purpose. Indeed, the shape of case edge material 2, with sloping yarn bundle guide part 21 and yarn bundle prescribing part 22, and the fact that the septum 5 does not completely encompass yarn bundle prescribing part 22, makes it virtually impossible for yarn bundle prescribing part 22 to serve any sort of anchoring purpose. Only the lower surface along yarn bundle guide part 21, and the substantially flat surface of yarn bundle prescribing part 22 are encased in the septum 5. An upper surface of yarn bundle prescribing part 22 does not contact the septum 5, but instead presents itself to an optional annular packing member 7, and in its absence, to a header material 6 (see page 5, paragraph 43 in the computer translation and FIG. 2). Indeed, case edge material 2 with yarn bundle guide part 21 is designed to provide a smooth sloping surface to guide the hollow yarn bundles 4 into position within yarn bundle prescribing part 22 to present a uniform face, in conjunction with septum 5, to the blood

room 62. Annular rounded ridges 318, which are comparable to yarn bundle guide part 21, on the lower surface of annular anchor 306 of Applicant's invention, would make this sliding function of the microfibers 104 impossible. The microfibers 104, upon insertion, would contact annular rounded ridges 318 and be forced to turn, curl, twist, or otherwise be deflected in indeterminate directions.

Applicant's invention, on the other hand, teaches a ring 108 for the purpose of forming a seal between the blood and the dialysate compartments (page 9, lines 6-9 in the specification). The detailed geometry of ring 108, mainly annular anchor 306, minimizes delamination or propagation of the delamination of the potting material through the creation of physical stops, thus helping to anchor the potting compound to ring 108 (page 9, lines 24-26 in the specification). In addition, annular anchor 306 is completely encased or embedded in potting compound 116, creating a mechanical lock which forces delamination to completely circumvent around and through the Annular Rounded Ridges 318, on both upper and lower surfaces, to create an actual delamination between the blood and dialysate compartments (page 13, lines 13-19 in the specification).

JP-10-165,777 thus differs from Applicant's invention in object, function, and purpose. In addition, the septum 5 (potting compound 116) of JP-10-165,777 does not encase both the upper and lower surfaces of the yarn bundle prescribing part 22 (annular anchor 306) of case edge material 2 (ring 108) as claimed by Applicant in amended claims 1 and 14. Since the JP-10-165,777 reference does not disclose expressly or inherently all of the elements and limitations of Applicant's amended claims 1 and 14, Applicant believes that these claims are now not anticipated by JP-10-165,777 and requests withdrawal of the Examiner's rejection under 35 U.S.C. §102(b).

Claims 2-4, 13, 15, 16, and 25, depend directly or indirectly from independent claims 1 or 14 and include all the elements and limitations thereof. As a result, and in light of the foregoing remarks concerning independent claims 1 and 14, Applicant likewise believes that claims 2-4, 13, 15, 16, and 25 also overcome the Examiner's rejection based on JP-10-165,777 under 35 U.S.C. §102(b), and withdrawal of that rejection in respect to these claims is respectfully requested.

2. The Examiner has rejected claims 12, 24, 26-30, 34, and 35 under 35 U.S.C. §102(b) as being anticipated by, or in the alternative, under 35 U.S.C. §103(a) obvious over JP-10-165,777.

In response, Applicant has amended independent claims 1, 14, and 26 and dependent claim 28 to more distinctly distinguish Applicant's invention through the further limitations of:

"said first [or second] annular anchor has an upper surface and a lower surface" and a first potting material . . . encasing "said upper surface and said lower surface" of said first [or second] annular anchor . . .

Support for these amendments may be found in the specification on page 9, lines 6-14, and page 13, lines 13-19, and in reference to FIGS. 3A-3D and FIG. 4. Applicant submits that JP-10-165,777 does not teach nor suggest the additional limitations, nor would the additional limitations be obvious over JP-10-165,777.

Applicant repeats the arguments made above in Section A(1) regarding the 35 U.S.C. §102(b) basis of rejection. In addition, on the basis of the arguments presented above in Section A(1), Applicant believes that amended independent claims 1, 14, and 26, and dependent claims 12, 24, 27-30, 34, and 35 are not obvious over JP-10-165,777. The JP-10-165,777 reference teaches away from Applicant's invention in that the purpose of the case edge material 2 (Applicant's ring 108) having a yarn bundle prescribing part 22 (Applicant's annular anchor 306) is to pinch or restrict the hollow yarn bundles 4 when inserted within case edge material 2 and slid against yarn bundle guide part 21. There is no motivation for one skilled in the art to modify the inclined yarn bundle guide part 21 with Applicant's annular rounded ridges 318, as this would defeat the purpose of being able to pinch or restrict the hollow yarn bundles 4 when inserted within case edge material 2. Moreover, there is no motivation for one skilled in the art to encase both upper and lower surfaces of yarn bundle prescribing part 22 as Applicant's annular anchor 306. If the hollow yarn bundles 4 were extended past the edge of case edge material 2, the hollow yarn bundles 4 would become unrestricted again, flaring outwardly once moved past the edge of yarn bundle prescribing part 22. Then, once encased in septum 5, the uniform appearance at the edge of septum 5 would be lost.

Since the JP-10-165,777 reference does not disclose expressly or inherently all of the elements and limitations of Applicant's amended independent claims, and further in light of the teaching away of the JP-10-165,777 reference from Applicant's invention and the lack of

motivation to modify Applicant's invention from the teaching of the JP-10-165,777 reference, Applicant believes that claims 12, 24, 26-30, 34, and 35 are neither anticipated under 35 U.S.C. §102(b) by JP-10-165,777, or in the alternative, obvious under 35 U.S.C. §103(a) over JP-10-165,777. Applicant thus believes that claims 12, 24, 26-30, 34, and 35 now overcome the Examiners rejection, and withdrawal of the rejection in both alternatives in respect to these claims is respectfully requested.

**B. Rejection of Claims
Under 35 U.S.C. § 103(a)**

1. The Examiner has rejected claims 8-11, 20-23, 31-33, and 55-58 under 35 U.S.C. §103(a) as being unpatentable over JP-10-165,777 in view of Lacy et al., U.S. Patent No. 6,280,619.

In response, Applicant has amended independent claims 1, 14, 26, and 55 and dependent claim 56 to more distinctly distinguish Applicant's invention through the further limitations of:

"said first [or second] annular anchor has an upper surface and a lower surface" and a first potting material . . . encasing "said upper surface and said lower surface" of said first [or second] annular anchor . . .

Support for these amendments may be found in the specification on page 9, lines 6-14, and page 13, lines 13-19, and in reference to FIGS. 3A-3D and FIG. 4.

Applicant repeats the arguments made above in Section A(1) regarding the 35 U.S.C. §102(b) basis of rejection and Section A(2) regarding the 35 U.S.C. §103(a) basis of rejection for independent claims 1, 14, and 26. Applicant thus believes that the similar amendments made to independent claim 55 has also removed the JP-10-165,777 reference as anticipatory prior art under 35 U.S.C. §102(b). Therefore, combining Lacy et al. with the teaching of JP-10-165,777 cannot arrive at Applicant's claimed invention as embodied in independent claim 55. Applicant thus believes that independent claim 55 now overcomes the Examiners rejection based on JP-10-165,777 in view of Lacy et al., and withdrawal of that rejection in respect to this claims is respectfully requested.

Claims 8-11, 20-23, 31-33, and 56-58 depend directly or indirectly from independent claims 1, 14, 26, and 55 and include all the elements and limitations thereof. As a result, and in light of the foregoing remarks concerning independent claims 1, 14, 26, and 55, Applicant

likewise believes that claims 8-11, 20-23, 31-33, and 56-58 also overcome the Examiner's rejection based on JP-10-165,777 in view of Lacy et al. under 35 U.S.C. §103(a), and withdrawal of that rejection in respect to these claims is respectfully requested.

2. The Examiner has rejected claims 50-53 under 35 U.S.C. §103(a) as being unpatentable over JP-10-165,777 in view of Eguchi, U.S. Patent No. 5,472,601.

Applicant respectfully traverses. Applicant repeats the arguments made above in Section A(1) regarding the 35 U.S.C. §102(b) basis of rejection for independent claims 1, 14, and 26. The septum 5 (potting compound 116) of JP-10-165,777 does not encase both the upper and lower surfaces of the yarn bundle prescribing part 22 (annular anchor 306) of case edge material 2 (ring 108) as claimed by Applicant in claim 50. Eguchi teaches an anchoring ring, but like Applicant's anchoring ring 108, the lower surface of the ring of Eguchi would make the sliding function of the hollow yarn bundles 4 offered by the sloping yarn bundle guide part 21 of JP-10-165,777 impossible. The hollow yarn bundles 4, upon insertion, would contact the reverse-sloping edge of the Eguchi ring and be forced to turn, curl, twist, or otherwise be deflected in indeterminate directions. Thus, there would be no motivation to combine the teaching of Eguchi with that of JP-10-165,777 because the combination would defeat the purpose of case edge material 2 having yarn bundle prescribing part 22 with sloping yarn bundle guide part 21 for pinching, or restricting the hollow yarn bundles 4 to present a uniform face to the blood room 62.

Applicant thus believes that independent claim 50 is not obvious over JP-10-165,777 in view of Eguchi, and withdrawal of that rejection in respect to this claim is respectfully requested. Claims 51-53 depend directly or indirectly from independent claim 50 and include all the elements and limitations thereof. Therefore, combining Eguchi with the teaching of JP-10-165,777 cannot arrive at Applicant's claimed invention as embodied in dependent claims 51-53. Applicant thus believes that dependent claims 51-53 also overcome the Examiners rejection based on JP-10-165,777 in view of Eguchi, and withdrawal of that rejection in respect to these claims is respectfully requested.

3. The Examiner has rejected claim 54 under 35 U.S.C. §103(a) as being unpatentable over JP-10-165,777 in view of Eguchi, U.S. Patent No. 5,472,601, and further in view of Elgas, U.S. Patent No. 5,922,202.

Applicant respectfully traverses. Applicant repeats the arguments made above in Section A(1) regarding the 35 U.S.C. §102(b) basis of rejection for independent claims 1, 14, and 26, and in Section B(2) regarding the 35 U.S.C. §103(a) basis of rejection for independent claim 50. Claim 54 depends directly or indirectly from independent claim 50 and includes all the elements and limitations thereof. Therefore, combining Eguchi further in view of Elgas with the teaching of JP-10-165,777 cannot arrive at Applicant's claimed invention as embodied in dependent claim 54. Applicant thus believes that dependent claim 54 overcomes the Examiners rejection based on JP-10-165,777 in view of Eguchi, and further in view of Elgas, and withdrawal of that rejection in respect to these claims is respectfully requested.

4. The Examiner has rejected claims 5, 17, 36, and 45-47 under 35 U.S.C. §103(a) as being unpatentable over JP-10-165,777 in view of Elgas, U.S. Patent No. 5,922,202.

In response, Applicant has amended independent claim 45 and dependent claim 46 to more distinctly distinguish Applicant's invention through the further limitations of:

"said first [or second] annular anchor has an upper surface and a lower surface" and a first potting material . . . encasing "said upper surface and said lower surface" of said first [or second] annular anchor . . .

Support for these amendments may be found in the specification on page 9, lines 6-14, and page 13, lines 13-19, and in reference to FIGS. 3A-3D and FIG. 4.

Applicant repeats the arguments made above in Section A(1) regarding the 35 U.S.C. §102(b) basis of rejection for independent claims 1, 14, and 26. Applicant thus believes that the similar amendments made to independent claim 45 has also removed the JP-10-165,777 reference as anticipatory prior art under 35 U.S.C. §102(b). Therefore, combining Elgas with the teaching of JP-10-165,777 cannot arrive at Applicant's claimed invention as embodied in independent claim 45. Applicant thus believes that independent claim 45 now overcomes the Examiners rejection based on JP-10-165,777 in view of Elgas, and withdrawal of that rejection in respect to these claims is respectfully requested.

Claims 5, 17, 36, and 46-47 depend directly or indirectly from independent claims 1, 14, 26, and 45 and includes all the elements and limitations thereof. Therefore, combining Elgas with the teaching of JP-10-165,777 cannot arrive at Applicant's claimed invention as embodied

in dependent claims 5, 17, 36, and 46-47. Applicant thus believes that dependent claims 5, 17, 36, and 46-47 now overcome the Examiners rejection based on JP-10-165,777 in view of Elgas, and withdrawal of that rejection in respect to these claims is respectfully requested.

5. The Examiner has rejected claims 6, 7, 18, 19, 37, 38, 48, and 49 under 35 U.S.C. §103(a) as being unpatentable over JP-10-165,777 in view of Elgas, U.S. Patent No. 5,922,202, and further in view of Eguchi, U.S. Patent No. 5,472,601.

In response, Applicant has amended independent claims 1, 14, 26, and 45 to more distinctly distinguish Applicant's invention through the further limitations of:

"said first [or second] annular anchor has an upper surface and a lower surface" and a first potting material . . . encasing "said upper surface and said lower surface" of said first [or second] annular anchor . . .

Support for these amendments may be found in the specification on page 9, lines 6-14, and page 13, lines 13-19, and in reference to FIGS. 3A-3D and FIG. 4.

Applicant repeats the arguments made above in Section A(1) regarding the 35 U.S.C. §102(b) basis of rejection for independent claims 1, 14, and 26 and Section B(4) regarding the 35 U.S.C. §103(a) basis of rejection for independent claim 45. Claims 6, 7, 18, 19, 37, 38, 48, and 49 depend directly or indirectly from independent claims 1, 14, 26, and 45 and includes all the elements and limitations thereof. Therefore, combining Elgas in view of Eguchi with the teaching of JP-10-165,777 cannot arrive at Applicant's claimed invention as embodied in dependent claims 6, 7, 18, 19, 37, 38, 48, and 49. Applicant thus believes that dependent claims 6, 7, 18, 19, 37, 38, 48, and 49 now overcome the Examiners rejection based on JP-10-165,777 in view of Elgas and further in view of Eguchi, and withdrawal of that rejection in respect to these claims is respectfully requested.

6. The Examiner has rejected claims 59-61 under 35 U.S.C. §103(a) as being unpatentable over JP-10-165,777 in view of Lacy et al., U.S. Patent No. 6,280,619, and further in view of Eguchi, U.S. Patent No. 5,472,601 and Elgas, U.S. Patent No. 5,922,202.

In response, Applicant has amended independent claim 55 and dependent claim 56 to more distinctly distinguish Applicant's invention through the further limitations of:

"said first [or second] annular anchor has an upper surface and a lower surface" and a first potting material . . . encasing "said upper surface and said lower surface" of said first [or second] annular anchor . . .

Support for these amendments may be found in the specification on page 9, lines 6-14, and page 13, lines 13-19, and in reference to FIGS. 3A-3D and FIG. 4.

Applicant repeats the arguments made above in Section B(1) regarding the 35 U.S.C. §103(b) basis of rejection for independent claim 55. Applicant thus believes that the amendments made to independent claim 55 has removed the JP-10-165,777 reference in view of Lacy et al., as obvious prior art under 35 U.S.C. §103(a). Claims 59-61 depend directly or indirectly from independent claim 55 and dependent claim 56 and includes all the elements and limitations thereof. Therefore, combining Eguchi and Elgas with the teaching of JP-10-165,777 in view of Lacy et al., cannot arrive at Applicant's claimed invention as embodied in dependent claims 59-61. Applicant thus believes that dependent claims 59-61 now overcome the Examiners rejection based on JP-10-165,777 in view of Lacy et al., and further in view of Eguchi and Elgas, and withdrawal of that rejection in respect to these claims is respectfully requested.

CONCLUSION:

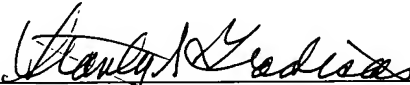
A bona-fide attempt has been made to place this application in condition for allowance. Each of the Examiner's bases for objection and rejection have been addressed and the claims have been amended, canceled, or arguments presented to overcome such rejections. The application is now believed to meet all statutory requirements and is thus believed to be in condition for allowance. The Examiner's early indication to that effect is, therefore, courteously solicited.

If a telephone conference would expedite allowance or resolve any additional questions, such a call is invited at the Examiner's convenience.

Applicant does not believe that any fees are due with this response. If this is not the case, please charge any required fees due, or credit any overpayment to, deposit account 50-0792.

Respectfully submitted,

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